

REPORT ON MACHINERY.

Received at London **THURSDAY 28 AUGUST 1884**

No. 13504

Date, first Survey March 12th 1884 Last Survey August 22nd 1884

No. in Survey held at Sunderland

(Number of Visits 30) Tons 1261.2

Reg. Book. on the S.S. "Cortés"

Tons 944.4

Master Baldo Built at Sunderland By whom built James Laing

When built 1884

Engines made at Sunderland By whom made John Dickinson

when made 1884

Boilers made at Sunderland By whom made John Dickinson

when made 1884

Registered Horse Power 95 Owners Mrs Roca & Co

Port belonging to Barcelona

ENGINES, &c.—

Description of Engines V.C.S.C.D.A.

Diameter of Cylinders 26" x 52" Length of Stroke 30" No. of Rev. per minute 60 Point of Cut off, High Pressure 1/2 stroke Low Pressure 1/2 stroke

Diameter of Screw shaft 9 1/4" Diam. of Tunnel shaft 9" Diam. of Crank shaft journals 9 1/4" Diam. of Crank pin 9 1/4" size of Crank webs 10 3/4" x 6 1/2"

Diameter of screw 13-0" Pitch of screw 14-0" No. of blades 4 state whether moveable not total surface 46 sq ft

No. of Feed pumps 2 diameter of ditto 3 1/2" Stroke 16 1/2" Can one be overhauled while the other is at work yes

No. of Bilge pumps 2 diameter of ditto 4 1/2" Stroke 16 1/2" Can one be overhauled while the other is at work yes

Where do they pump from Fore & main holds, engine room & after well

No. of Donkey Engines one Size of Pumps 4 x 6" Where do they pump from Fore & main holds

engine room, after well & sea

Are all the bilge suction pipes fitted with roses yes Are the roses always accessible yes Are the sluices on Engine room bulkheads always accessible yes

No. of bilge injections one and sizes 4" Are they connected to condenser, or to circulating pump Circulating pump

How are the pumps worked By levers on forward engine

Are all connections with the sea direct on the skin of the ship yes Are they Valves or Cocks both

Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates yes Are the discharge pipes above or below the deep water line above

Are they each fitted with a discharge valve always accessible on the plating of the vessel yes Are the blow off cocks fitted with a spigot and brass covering plate yes

What pipes are carried through the bunkers none How are they protected —

Are all pipes, cocks, valves, and pumps in connection with the machinery accessible at all times yes

Are the pipes, cocks, and valves arranged so as to prevent an unintentional connection between the sea and the bilges yes

When were stern tube, propeller, screw shaft, and all connections examined in dry dock New vessel

Is the screw shaft tunnel watertight no tunnel and fitted with a sluice door — worked from Engine aft in stern of vessel

OILERS, &c.—

Number of Boilers One Description Cylindrical, dble ended Whether Steel or Iron Steel

Working Pressure 90 lbs Tested by hydraulic pressure to 180 lbs Date of test 12-6-84

Description of superheating apparatus or steam chest Horizontal dome, across boiler, below uptake of funnel

Can each boiler be worked separately only one Can the superheater be shut off and the boiler worked separately no superheater

No. of square feet of fire grate surface in each boiler 50 sq ft Description of safety valves direct spring No. to each boiler 2

Area of each valve 12-56 sq Are they fitted with easing gear yes No. of safety valves to superheater — area of each valve —

Are they fitted with easing gear — Smallest distance between boilers and bunkers or woodwork 15" Diameter of boilers 11-2 1/4"

Length of boilers 15-0" description of riveting of shell long. seams treble lap circum. seams dble lap Thickness of shell plates 7/8"

Diameter of rivet holes 1 1/4" whether punched or drilled drilled pitch of rivets 4 1/2" Lap of plating 9"

Percentage of strength of longitudinal joint 72% working pressure of shell by rules 111 lbs size of manholes in shell 16 x 12"

Size of compensating rings 6 x 1" No. of Furnaces in each boiler 4

Outside diameter 3-3" length, top 6-0" bottom 9-0" thickness of plates 15" x 19" description of joint dble butt straps if rings are fitted yes

Greatest length between rings 9-0" working pressure of furnace by the rules 90 lbs combustion chamber plating, thickness, sides 1/2" back none top 1/2"

Pitch of stays to ditto, sides 8 x 8" back none top 8 x 8" If stays are fitted with nuts or riveted heads nuts working pressure of plating by rules 120 lbs

Diameter of stays at smallest part 1 1/2" working pressure of ditto by rules 92 lbs end plates in steam space, thickness 1 1/2"

Pitch of stays to ditto 15 1/2" x 15 1/2" how stays are secured nuts working pressure by rules 98 lbs diameter of stays at smallest part 2 1/8"

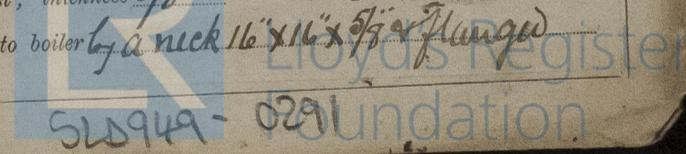
Greatest pitch of stays — working pressure by rules — Diameter of tubes 2 3/4" pitch of tubes 4 x 3 3/4" thickness of tube plates, front 13" back 3 1/4" how stayed stay tubes pitch of stays 8 x 11 1/4" width of water spaces 1.6.

Diameter of Superheater or Steam chest 4-0" length 10-0" thickness of plates 3/8" description of longitudinal joint dble riv lap diam. of rivet holes 3/4"

Pitch of rivets 2 1/2" working pressure of shell by rules 109 lbs diameter of flue — thickness of plates — If stiffened with rings —

Distance between rings — working pressure by rules — end plates of superheater or steam chest; thickness 3/8" how stayed dished to a radius

of 2-3" x one stay 2 1/2" diam effective Superheater or steam chest; how connected to boiler by a neck 16" x 16" x 5/8" or flange



DONKEY BOILER— Description *Vertical with three cross tubes*
 Made at *Sunderland* by whom made *Messrs Helyard Bros* when made *4-7-84* where fixed *Upper deck*
 Working pressure *60 lbs* tested by hydraulic pressure to *120 lbs* No. of Certificate *460* fire grate area *15 sq ft* description of safety
 valve *Direct spring* No. of safety valves *one* area of each *9.620* if fitted with easing gear *yes* if steam from main boilers can
 enter the donkey boiler *no* diameter of donkey boiler *5-3"* length *12-0"* description of riveting *Double riveted*
 Thickness of shell plates *3/8"* diameter of rivet holes *3/4"* whether punched or drilled *punched* pitch of rivets *3"* lap of plating *3 3/4"*
 per centage of strength of joint *45%* thickness of crown plates *7/16"* stayed by *4 stays 1 1/2" diam & uptake also dished to a r*
 Diameter of furnace, top *3-9"* bottom *4-6"* length of furnace *4-9"* thickness of plates *7/16"* description of joint *lapsingle riv* *9 5-0"*
 Thickness of furnace crown plates *7/16"* stayed by *4 stays 1 1/2" diam & uptake, dished to a radius of 5-0"* working pressure of shell by rules *49 lbs*
 Working pressure of furnace by rules *64 lbs* diameter of uptake *15"* thickness of plates *3/8"* thickness of water tubes *3/8"*

SPARE GEAR. State the articles supplied:— *2 Connecting rod top & 2 bottom end bolts & nuts*
2 main bearing bolts, 1 set of coupling bolts, one set of feed & bilge pump
valves, one slide valve spindle, one escape valve spring, bolts, nuts & iron
assorted

The foregoing is a correct description,
 FOR JOHN DICKINSON - Manufacturer.

M. Buchanan

General Remarks (State quality of workmanship, opinions as to class, &c.)

*The engines and boilers of this vessel have been con-
 structed under special survey. The material and workmanship
 are good and efficient and the engines when tried under stea
 worked satisfactorily*

*In my opinion the machinery of this vessel is in good order
 and safe working condition and eligible for the notification
 in the Register Book of LLOYD'S. M.C. 8. 84.*

*It is submitted that this vessel
 is eligible to have the
 notification & class
 & so recorded.*

*W.P.
 26/8/84*

The amount of Entry Fee £ *1* : 0 : 0 received by me,
 Special £ *14* : 5 : 0
 Donkey Boiler Fee .. £ ..
 Certificate (if required) .. £ .. *26 Aug 1884*

(Travelling Expenses, if any, £ ..)

Committee's Minute

FRIDAY 29 AUGUST 1884

Paul Salmon
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.



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